## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (Currently Amended) A network electric device for communicating with another network electric device on a network, the network electric device comprising a processor configured for executing at least an application layer, a network layer, a data link layer, a physical layer, an application software, a network management sub-layer, and a parameter management layer,

wherein the application layer handles a message for controlling or monitoring the network electric device or the other network electric device, and the application layer communicating with the application software and communicating with the network layer,

wherein the application layer transmits a APDU (application protocol data unit) to the network layer;

wherein the network layer performs at least an address management function and a routing control function and the network layer communicating with the data link layer,

wherein the network layer transmits a NPDU (network protocol data unit) to the data link layer,

wherein the NPDU comprises a start indicating field, a length field, and an end indication field, the start indicating field indicating a start of the NPDU, the length field specifying a length of the NPDU, and the end indication field indicating an end of the NPDU,

wherein when a data having a length corresponding to the length field is received by the processor and the end indication field is not received by the processor, the processor considers this as a data error,

wherein the data link layer accesses a transmission medium, the data link layer communicating with the physical layer,

wherein the physical layer provides a physical interface between the network electric device and the other network electric device,

wherein the application software performs an intrinsic function of the network electric device,

wherein the network management sub-layer transmits a parameter set-primitive to the parameter management layer, the parameter set-primitive including a destination layer field

indicating a destination layer among the application layer, the network layer, the data link layer, and the physical and a parameter field including a parameter to be set in the destination layer ~~indicating which parameter is to be set, and the destination layer field indicating one of the application layer, the network layer, the data link layer, and the physical layer~~, and

wherein when the parameter management layer receives the parameter set-primitive, the parameter management layer transmits the parameter included in the parameter field to the destination layer indicated by the destination layer field ~~processes the received parameter set-primitive according to the destination field and the parameter field included in the parameter set-primitive~~.

2. (Previously Presented) The network electric device of claim 1, wherein the physical layer further comprises a special protocol for providing an interface with a dependent transmission medium, and the network electric device includes a home code control sub-layer for managing a home code for network security when accessing the dependent transmission medium.

3-6. (Canceled)

7. (Previously Presented) The network electric device of either claim 1 or 2, wherein the interface between the physical layer and the data link layer comprises a frame sending primitive, a frame receiving primitive and a line status transmitting primitive.

8-9. (Canceled)

10. (Previously Presented) The network electric device of either claim 1 or 2, wherein the interface between the data link layer and the network layer comprises a packet sending primitive, a packet receiving primitive and a data link layer completing primitive.

11-14. (Canceled)

15. (Previously Presented) The network electric device of either claim 1 or 2, wherein the interface between the network layer and the application layer comprises a request message sending primitive, a message receiving primitive and a network layer completing primitive.

16-20. (Canceled)

21. (Previously Presented) The network electric device of either claim 15, wherein the network electric device performs a master function.

22. (Previously Presented) The network electric device of either claim 1 or 2, wherein the interface between the network layer and the application layer comprises a request message receiving primitive, a response message sending primitive, an event message sending primitive and a network layer completing primitive.

23-28. (Canceled)

29. (Previously Presented) The network electric device of claim 22, wherein the network electric device performs a slave function.

30. (Previously Presented) The network electric device of either claim 1 or 2, wherein the interface between the application layer and the application software comprises a user request primitive, a user download request primitive, a user upload request primitive, a user response primitive, a user event receiving primitive and an application layer completing primitive.

31-37. (Canceled)

38. (Previously Presented) The network electric device of claim 30, wherein the network electric device performs a master function.

39. (Previously Presented) The network electric device of either claim 1 or 2, wherein the interface between the application layer and the application software comprises a user request receiving primitive, a user response sending primitive and a user event sending primitive.

40- 42. (Canceled)

43. (Previously Presented) The network electric device of claim 39, wherein the network electric device performs a slave function.

44. (Previously Presented) The network electric device of claim 1, wherein the parameter of the physical layer comprises a communication speed.

45. (Previously Presented) The network electric device of claim 1, wherein the parameter of the data link layer comprises at least one of frame timeout, a maximum frame allowable interval time, a minimum packet allowable interval time, a backoff retry number, a maximum transmission allowable time, a busy check time and a transmission delay time.

46. (Previously Presented) The network electric device of claim 1, wherein the parameter of the network layer comprises at least one of a product code, a node address, a cluster code, a home code, a maximum retry number, transmission timeout, a response delay time, a transmission delay time and a duplicate packet elapsed time.

47. (Previously Presented) The network electric device of claim 1, wherein the parameter of the application layer comprises at least one of a transmission interval between address request messages, a transmission interval between active event messages, a buffer size, service timeout and a transmission interval between download messages.

48. (Currently Amended) The network electric device of any one of claims 1 or 44 to 47, wherein the network management sub-layer interfaces with the parameter management layer through at least one of the parameter set_primitive and a parameter get_primitive in order to set or get at least one of the parameters of the physical layer, the data link layer, the network layer and the application layer.

49. (Previously Presented) The network electric device of claim 48, wherein the parameter management layer interfaces with the physical layer, the data link layer, the network layer or the application layer through at least one of a parameter setting primitive, a parameter getting primitive and a parameter transmitting primitive in order to set, get or transmit at least one of the parameters of the physical layer, the data link layer, the network layer and the application layer.

50. (Previously Presented) The network electric device of claim 1, wherein when the destination layer field indicates the application layer, the parameter field indicates at least one of

a first time interval parameter, a second time interval parameter, a buffer size parameter, and a service timeout parameter,

wherein the first time interval parameter specifies a time interval of a address request message, the second time interval parameter specifies a time interval of an active event message informing network status, the buffer size parameter specifies a buffer size of a message, and the service timeout parameter specifies a time for waiting a primitive.

51. (Previously Presented) The network electric device of claim 1, wherein when the destination layer field indicates network layer, the parameter field indicates at least one of a logical address parameter, a cluster code parameter, a home code parameter, and a retry parameter,

wherein the logical address parameter specifies a logical address for distinguishing a plurality of network electric devices having the same product code, the cluster code parameter specifies a cluster code distinguishing cluster of network electric device, the home code parameter specifies a home code of network electric device and the retry parameter specifies a retry number.

52. (Currently Amended) The network electric device of claim 1, wherein when the destination layer field indicates the data link layer, the parameter field is a third time interval, the third time interval specifying a minimum time interval between packets[[,]].

53. (Previously Presented) The network electric device of claim 1, wherein when the destination layer field indicates the physical layer, the parameter field specifies a communication speed.